Module 7
Section A: Warehouse Strategy and Tactics

Term
Automated storage/retrieval system (AS/RS)

Module 7
Section A: Warehouse Strategy and Tactics

Term
Bonded warehouse

Module 7
Section A: Warehouse Strategy and Tactics

Term
Break-bulk

Module 7
Section A: Warehouse Strategy and Tactics

Term
Consolidation

Module 7
Section A: Warehouse Strategy and Tactics

Term
Cross-docking

Module 7
Section A: Warehouse Strategy and Tactics

Term
Cross-docking warehouse

Module 7
Section A: Warehouse Strategy and Tactics

Term
Distribution center

Module 7
Section A: Warehouse Strategy and Tactics

Term
Private warehouse

Buildings or parts of buildings designated by the US Secretary of the Treasury for storing imported merchandise, operated under US Customs supervision.

A high-density rack inventory storage system that uses vehicles to automatically load and unload the racks.

The grouping of shipments to obtain reduced costs or improved utilization of the transportation function. Consolidation can occur by market area grouping, grouping according to scheduled deliveries, or using third-party pooling services such as public warehouses and freight forwarders. Syn.: freight consolidation. See: milk run.

1) Dividing truckloads, railcars, or containers of homogeneous items into smaller, more appropriate quantities for use. 2) A distribution center that specializes in [these types of] activities. 3) Unitized cargo in bales, boxes, or crates that is placed directly in a ship's holds rather than in containers.

A warehouse or portion of a warehouse used for cross-docking. See: cross-docking.

The concept of packing products on incoming shipments so they can be easily sorted at intermediate warehouses or for outgoing shipments based on final destination. The items are carried from the incoming vehicle docking point to the outgoing vehicle docking point without being stored in inventory at the warehouse. [It] reduces inventory investment and storage space requirements. Syn.: direct loading.

A company-owned warehouse.

A location used to store inventory. Decisions driving warehouse management include site selection, number of facilities in the system, layout, and methods of receiving, storing, and retrieving goods.

Module 7
Section A: Warehouse Strategy and Tactics

Term
Public warehouse

Module 7
Section A: Warehouse Strategy and Tactics

Term
Spot stock warehousing

Module 7
Section A: Warehouse Strategy and Tactics

Term
Throughput

Module 7
Section A: Warehouse Strategy and Tactics

Term
Warehouse

Module 7
Section A: Warehouse Strategy and Tactics

Term
Warehousing

Module 7
Section B: Warehouse Processes

Term
First expiry first out (FEFO)

Module 7
Section B: Warehouse Processes

Term
Part-to-picker system

Module 7
Section B: Warehouse Processes

Term
Picker-to-part system

Positioning seasonal items in proximity to the market. When the season ends, these items are either disposed of or relocated to a more centralized location.

The warehouse space that is rented or leased by an independent business providing a variety of services for a fee or on a contract basis. These services can include product inspection, product rating, and repackaging. These facilities are typically located near primary roads, railways, or inland waterways to facilitate rapid receiving and shipping of products. Syn.: duty paid warehouse.

A place to receive, store, and ship materials.

The rate at which the system generates “goal units.” Because [this] is a rate, it is always expressed for a given time period—such as per month, week, day, or even minute. If the goal units are money, [this] is an amount of money per time period. In that case, [it] is calculated as revenues received minus totally variable costs divided by units of the chosen time period.

A picking methodology assuring that the usage shelf life of items is optimized. Years ago, first in, first out (FIFO) was satisfactory as the shelf-life days for items often didn’t vary and FIFO often coincided with the expiry dates. However, re-testing is frequently done to extend shelf-life dates on some lots or batches, while other lots may have typical shelf-life dates shortened because of quality or processes. Thus, FEFO was introduced by software vendors to provide this picking methodology for use with shelf-life controlled items.

The activities related to receiving, storing, and shipping materials to and from production or distribution locations.

A materials handling approach for order picking in which the picker goes to the product location (e.g., forklifts, order picking trucks).

A materials handling approach for order picking where the pick location is brought to the order picker (e.g., carousels).

Module 7
Section B: Warehouse Processes

Term
Picking list

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Section B: Warehouse Processes

Term
Replenishment

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Module 7
Section B: Warehouse Processes

Term
Slip sheet

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Module 7
Section B: Warehouse Processes

Term
Sorting

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Module 7
Section B: Warehouse Processes

Term
Unit load

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Module 7
Section B: Warehouse Processes

Term
Warehouse receiving

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Module 7
Section B: Warehouse Processes

Term
Warehouse storage

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Module 7
Section C: Warehouse Layout

Term
Capacity

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Relocating material from a bulk storage area to an order pick storage area and documenting this relocation.

A document that lists the material to be picked for manufacturing or shipping orders. Syn.: disbursement list, material list, stores issue order, stores requisition.

The function of physically separating a homogeneous subgroup from a heterogeneous population of items.

Thin sheets of fiberboard or plastic on which product is stacked, used as an alternative to wood pallets because they take up little space in warehouses or shipping containers.

A key process in warehouse operation that ensures the correct product has been received, in the right quantity, in the right condition, and at the right time.

A shipping unit made up of a number of items; bulky material arranged or constrained so the mass can be picked up or moved as a single unit. Reduces material handling costs. Often shrink-packed on a pallet before shipment.

1) The capability of a system to perform its expected function. 2) The capability of a worker, machine, work center, plant, or organization to produce output per time period. Capacity required represents the system capability needed to make a given product mix (assuming technology, product specification, etc.). As a planning function, both capacity available and capacity required can be measured in the short term (capacity requirements plan), intermediate term (rough-cut capacity plan), and long term (resource requirements plan). Capacity control is the execution through the I/O control report of the short-term plan. Capacity can be classified as budgeted, dedicated, demonstrated, productive, protective, rated, safety, standing, or theoretical. See: capacity available, capacity required. 3) Required mental ability to enter into a contract.

Using a building or other structure as a planned space for storing goods and materials.

Module 7
Section C: Warehouse Layout

Term
Cube utilization

Module 7
Section C: Warehouse Layout

Term
Efficiency

Module 7
Section C: Warehouse Layout

Term
Honeycombing

Module 7
Section C: Warehouse Layout

Term
Rated capacity

Module 7
Section C: Warehouse Layout

Term
Standard hours

Module 7
Section C: Warehouse Layout

Term
Standard time

Module 7
Section C: Warehouse Layout

Term
Task interleaving

Module 7
Section C: Warehouse Layout

Term
Utilization

A measurement (usually expressed as a percentage) of the actual output relative to the standard output expected. [This] measures how well something is performing relative to existing standards; in contrast, productivity measures output relative to a specific input (e.g., tons/labor hour). [It] is the ratio of (1) actual units produced to the standard rate of production expected in a time period, or (2) standard hours produced to actual hours worked (taking longer means less [of this]), or (3) actual dollar volume of output to a standard dollar volume in a time period. For example: (1) There is a standard of 100 pieces per hour and 780 units are produced in one eight-hour shift; [this] is 780 ÷ 800 converted to a percentage, or 97.5 percent. (2) The work is measured in hours and took 8.21 hours to produce 8 standard hours; [this] is 8 ÷ 8.21 converted to a percentage, or 97.5 percent. (3) The work is measured in dollars and produces $780 with a standard of $800; [this] is $780 ÷ $800 converted to a percentage, or 97.5 percent.

In warehousing and transportation, a measurement of the utilization of the total storage capacity of a vehicle storage bay, container, type of warehouse equipment, or entire warehouse. The intent is to minimize unused horizontal or vertical space.

The expected output capability of a resource or system. Capacity is traditionally calculated from such data as planned hours, efficiency, and utilization. [This] is equal to hours available × efficiency × utilization. Syn.: calculated capacity, effective capacity, nominal capacity, standing capacity.

The practice of moving, in an orderly fashion, a pallet of merchandise to an area where the space is not exhausted, resulting in a vacant space not usable for the storage of other items. This is one of the hidden costs of warehousing.

The length of time that should be required to (1) set up a given machine or operation and (2) run one batch or one or more parts, assemblies, or end products through that operation. Used in determining machine requirements and labor requirements. Assumes an average worker who follows prescribed methods, and allows time for personal rest to overcome fatigue and unavoidable delays. Also frequently used as a basis for incentive pay systems and as a basis of allocating overhead in cost accounting systems. Syn.: standard hours. See: standard.

Syn.: standard time.

1) A measure (usually expressed as a percentage) of how intensively a resource is being used to produce a good or service. Compares actual time used to available time. Traditionally, calculated as the ratio of direct time charged (run time plus setup time) to the clock time available. [It] is a percentage between 0 percent and 100 percent that is equal to 100 percent minus the percentage of time lost due to the unavailability of machines, tools, workers, and so forth. See: efficiency, lost time factor, productivity. 2) In the theory of constraints, activation of a resource that productively contributes to reaching the goal. Over-activation of a resource does not productively [use] a resource. See: available time.

An attempt at reducing/eliminating deadheading (i.e., driving an empty material-handling vehicle). A warehouse management system directs a material-carrying vehicle to put away materials as it goes to pick up other materials.

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Automated guided vehicle system (AGVS)

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Conveyor

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Customs-Trade Partnership Against Terrorism (C-TPAT)

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Fixed-location storage

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Materials handling

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Pick-to-light

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Pick-to-voice system

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Put-to-light

A device following a fixed route that has the capability of moving material between points in a facility. This device commonly is used when there is a high volume of flow along the route.

A transportation network that automatically routes one or more material handling devices, such as carts or pallet trucks, and positions them at predetermined destinations without operator intervention.

A method of storage in which a relatively permanent location is assigned for the storage of each item in a storeroom or warehouse. Although more space is needed to store parts than in a random-location storage system, fixed locations become familiar, and therefore a locator file may not be needed. See: random-location storage.

A joint government-business endeavor for imports (not exports) to increase the security of supply chains and US borders. Initiated by US Customs, [this] involves voluntary cooperation of supply chain participants such as importers, carriers, brokers, warehouse operators, and manufacturers. Participants audit their logistical system security and answer a security questionnaire in exchange for a likely (but not guaranteed) faster customs clearing process and fewer inspections.

A pick system that uses software to light up displays at each pick location and determines how much needs to be picked. The pickers use this as their requirement to pull for that particular order to set of orders.

Movement and storage of goods inside the distribution center. This represents a capital cost and is balanced against the operating costs of the facility.

A process that uses lights to ensure materials are placed in the correct locations. Also used to ensure that picked items are placed correctly.

A method of performing order-picking activities in a warehouse or distribution center using verbal commands. Syn.: voice-based picking.

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Random-location storage

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Software-as-a-service (SaaS)

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Warehouse automation

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Warehouse management system (WMS)

Module 7
Section D: Materials Handling and Warehouse Automation

Term
Yard management system (YMS)

Module 7
Section E: Packaging

Term
Active tag

Module 7
Section E: Packaging

Term
Automatic identification and data capture (AIDC)

Module 7
Section E: Packaging

Term
Automatic identification system (AIS)

A software licensing and distribution model that provides access to applications via the internet on a subscription basis. A service provider hosts the application at its data center and customers access it through a web browser. Often referred to as “on-demand” software and used by companies to avoid purchasing, implementing and maintenance costs.

A storage technique in which parts are placed in any space that is empty when they arrive at the storeroom. Although this random method requires the use of a locator file to identify part locations, it often requires less storage space than a fixed-location storage method. Syn.: floating inventory location system, floating storage location. See: fixed-location storage.

A computer application system designed to manage and optimize workflows and the storage of goods within a warehouse. It often interfaces with automated data capture and enterprise resource planning systems.

The utilization of mechanical or electronic devices to complete tasks related to storing, retrieving, and moving inventory as a substitute for labor resources. Used for cost savings, added security, and to keep human workers out of sensitive environments.

A radio frequency identification tag that broadcasts information and contains its own power source. See: radio frequency identification (RFID).

A system that organizes and directs the traffic of all vehicles in the parking yards located at various industrial buildings like warehouses, distribution centers, and manufacturing plants.

A system that can use various means, including bar code scanning and radio frequencies, to sense and load data in a computer.

Technologies that collect data about objects and then sends the data to a computer without human intervention. Examples include radio frequency wireless devices and terminals, bar code scanners, and smart cards.

Module 7
Section E: Packaging

Term
Batch processing

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Module 7
Section E: Packaging

Term
Dunnage

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Module 7
Section E: Packaging

Term
Electronic product codes (EPCs)

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Module 7
Section E: Packaging

Term
Packaging

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Module 7
Section E: Packaging

Term
Pallet

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Module 7
Section E: Packaging

Term
Passive tag

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Module 7
Section E: Packaging

Term
Radio frequency identification (RFID)

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Module 7
Section E: Packaging

Term
Semipassive tag

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The packing material used to protect a product from damage during transport. Some industries use the term to refer specifically to returnable packaging only.

1) A manufacturing technique in which parts are accumulated and processed together in a lot. 2) A computer technique in which transactions are accumulated and processed together or in a lot. Syn.: batch production.

Materials surrounding an item to protect it from damage during transportation. The type of packaging influences the danger of such damage.

Codes that are used with RFID tags to carry information on the product that will support warranty programs.

A RFID tag that does not send out data and is not self-powered. See: radio frequency identification (RFID) tag.

A platform designed to be loaded with packages and moved by a forklift.

An RFID tag that sends out data, is self-powered, and widens its range by harnessing power from the reader. See: radio frequency identification (RFID).

A system using electronic tags to store data about items. Accessing or retrieving this data is accomplished through a specific radio frequency and does not require close proximity or line-of-sight access. See: active tag, passive tag, semi-passive tag.

Module 7

Section E: Packaging

Term

Unitization

In warehousing, the consolidation of several units into larger units for fewer handlings.